

## AMENDMENTS TO THE SPECIFICATION:

Please replace the paragraph on page 1, beginning at line 25, with the following paragraph and Table 1:

Accompanying this application is a duplicate set of CD-ROMs, labeled as “COPY 1 REPLACEMENT 06/11/04” and “COPY 2 REPLACEMENT 06/11/04”, respectively. Each disc includes with a copy of the software files identified in Table 1, which are currently utilized by the inventors in implementing the invention as disclosed in this application. The entire contents of each CD-ROM the content of which is are hereby incorporated by reference as if the source code and all files were printed out and included in the text of this application.

**Table 1: Contents of Accompanying CD-ROM**

<u>Filename</u>	<u>Date Created</u>	<u>Size (bytes)</u>
<u>AVIReader.cpp</u>	<u>7/2/2003</u>	<u>4,150</u>
<u>AVIReader.h</u>	<u>7/2/2003</u>	<u>1,120</u>
<u>AVIWriter.cpp</u>	<u>8/26/2002</u>	<u>5,028</u>
<u>AVIWriter.h</u>	<u>8/26/2002</u>	<u>1,447</u>
<u>classdata.dat</u>	<u>7/3/2003</u>	<u>1,217,616</u>
<u>d041002b_v.dat</u>	<u>4/10/2002</u>	<u>3,849</u>
<u>d041002b_w.dat</u>	<u>4/10/2002</u>	<u>43,002</u>
<u>Engine.h</u>	<u>7/1/2003</u>	<u>1,367</u>
<u>Engineaviimage.cpp</u>	<u>7/3/2003</u>	<u>29,239</u>
<u>Engineaviimagefastslowclassifier.cpp</u>	<u>7/3/2003</u>	<u>29,239</u>
<u>Engineaviimagefastslowclassifiertrackandvote.cpp</u>	<u>7/10/2003</u>	<u>26,376</u>
<u>Engineaviimagefastslowclassifiertrackandvotev2.cpp</u>	<u>7/10/2003</u>	<u>26,651</u>
<u>Engineaviimagefusionclassifier.cpp</u>	<u>7/8/2003</u>	<u>34,892</u>
<u>Engineaviimagefusionclassifierhome.cpp</u>	<u>7/8/2003</u>	<u>18,640</u>
<u>Enginesampledimage.cpp</u>	<u>7/1/2003</u>	<u>16,884</u>
<u>FindPedestrians.cpp</u>	<u>7/9/2003</u>	<u>4,638</u>
<u>FindPedestrians.h</u>	<u>5/1/2002</u>	<u>361</u>
<u>Image.cpp</u>	<u>7/2/2003</u>	<u>5,974</u>
<u>Image.h</u>	<u>7/2/2003</u>	<u>1,415</u>
<u>JUL01090000avi.dat</u>	<u>7/10/2003</u>	<u>13,705</u>
<u>Jul01100000avi.dat</u>	<u>7/10/2003</u>	<u>103,888</u>
<u>Jul01109000avi.dat</u>	<u>7/10/2003</u>	<u>13,705</u>
<u>Jul01110000avi.dat</u>	<u>7/10/2003</u>	<u>19,518</u>
<u>Jun30170000avi.dat</u>	<u>7/10/2003</u>	<u>36,447</u>
<u>MainFrm.cpp</u>	<u>7/1/2003</u>	<u>2,511</u>
<u>MainFrm.h</u>	<u>7/1/2003</u>	<u>1,581</u>
<u>motion.cpp</u>	<u>7/10/2003</u>	<u>3,042</u>
<u>motion.h</u>	<u>7/3/2003</u>	<u>450</u>
<u>NDA.cpp</u>	<u>3/6/2002</u>	<u>3,635</u>
<u>NDA.h</u>	<u>3/6/2002</u>	<u>587</u>
<u>Pfeat_ped.h</u>	<u>10/4/2002</u>	<u>1,926</u>
<u>PfeatMMX_ped.cpp</u>	<u>10/4/2002</u>	<u>22,143</u>
<u>ReadMe.txt</u>	<u>7/1/2003</u>	<u>4,407</u>
<u>resource.h</u>	<u>7/1/2003</u>	<u>690</u>
<u>SRFeatures_wobtstrp_es_101502_n20_v.dat</u>	<u>10/16/2002</u>	<u>778</u>
<u>SRFeatures_wobtstrp_es_101502_n20_w.dat</u>	<u>10/16/2002</u>	<u>8,397</u>
<u>SRFeatures_wobtstrp_fusion_101502_v.dat</u>	<u>10/16/2002</u>	<u>96</u>
<u>SRFeatures_wobtstrp_fusion_101502_w.dat</u>	<u>10/16/2002</u>	<u>1,391</u>

<u>Filename</u>	<u>Date Created</u>	<u>Size (bytes)</u>
<u>SRFeatures_wobtstrp_wv_101502_n20_v.dat</u>	<u>10/16/2002</u>	<u>3,399</u>
<u>SRFeatures_wobtstrp_wv_101502_n20_w.dat</u>	<u>10/16/2002</u>	<u>29,874</u>
<u>StdAfx.cpp</u>	<u>7/1/2003</u>	<u>212</u>
<u>StdAfx.h</u>	<u>7/1/2003</u>	<u>1,054</u>
<u>testpdata.dat</u>	<u>7/2/2003</u>	<u>891,476</u>
<u>testpdata1.dat</u>	<u>7/2/2003</u>	<u>297,291</u>
<u>testpdata2.dat</u>	<u>7/2/2003</u>	<u>297,291</u>
<u>testpdata3.dat</u>	<u>7/2/2003</u>	<u>297,291</u>
<u>wavelet_150D_091701_v.dat</u>	<u>9/17/2001</u>	<u>3,398</u>
<u>wavelet_150D_091701_w.dat</u>	<u>9/17/2001</u>	<u>29,848</u>
<u>wavelet_MMX.h</u>	<u>7/1/2003</u>	<u>1,398</u>
<u>Wavelet_MMX_new.cpp</u>	<u>3/4/2002</u>	<u>16,677</u>
<u>wavesym_190D_102401_full00_v.dat</u>	<u>10/24/2001</u>	<u>4,158</u>
<u>wavesym_190D_102401_full00_w.dat</u>	<u>10/24/2001</u>	<u>47,084</u>
<u>wavesym_190D_102401_full01_v.dat</u>	<u>10/24/2001</u>	<u>4,158</u>
<u>wavesym_190D_102401_full01_w.dat</u>	<u>10/24/2001</u>	<u>47,033</u>
<u>wavesym_190D_102401_full02_v.dat</u>	<u>10/24/2001</u>	<u>4,158</u>
<u>wavesym_190D_102401_full02_w.dat</u>	<u>10/24/2001</u>	<u>47,257</u>
<u>wavesym_190D_102401_full03_v.dat</u>	<u>10/24/2001</u>	<u>4,158</u>
<u>wavesym_190D_102401_full03_w.dat</u>	<u>10/24/2001</u>	<u>46,967</u>
<u>wavesym_190D_102401_full04_v.dat</u>	<u>10/24/2001</u>	<u>4,158</u>
<u>wavesym_190D_102401_full04_w.dat</u>	<u>10/24/2001</u>	<u>47,123</u>
<u>wavsym_190D_091801_v.dat</u>	<u>9/21/2001</u>	<u>4,158</u>
<u>wavsym_190D_091801_w.dat</u>	<u>9/21/2001</u>	<u>47,071</u>
<u>worldscape.cpp</u>	<u>7/1/2003</u>	<u>4,013</u>
<u>worldscape.h</u>	<u>7/1/2003</u>	<u>1,400</u>
<u>worldscapeDoc.cpp</u>	<u>7/1/2003</u>	<u>1,822</u>
<u>worldscapeDoc.h</u>	<u>7/1/2003</u>	<u>1,519</u>
<u>worldscapeView.cpp</u>	<u>7/8/2003</u>	<u>4,971</u>
<u>worldscapeView.h</u>	<u>7/8/2003</u>	<u>2,805</u>
<u>wvlet_features_comprehensive_042301_150D.txt</u>	<u>4/25/2001</u>	<u>940</u>

Please replace the paragraph on page 19, beginning at line 1, with the following paragraph:

Fig. 2a and 2b shows a more detailed flowchart of the present embodiment of the invention;

Please replace the paragraph on page 28, beginning at line 3, with the following paragraph:

As is illustrated in Fig. 2b, several feature set definitions, created, e.g., through template matching, e.g., Hausdorf template matching in block 16b, as illustrated more particularly in regard to Fig. 7, and, e.g., wavelet feature extraction in block 16c can be utilized, e.g., along with the symmetry based feature extraction, e.g., from block 86, e.g., to provide inputs for the creation of, e.g., an object signature in block 88. The object signature output of block 88 can then be utilized, e.g., for classification matching in block 90. Also shown in Fig. 2b is the edge detection, e.g., as provided in block 80 providing an input to the

Hausdorff template matching in block 16b and, e.g., the foreground blob from block 62 providing an input to the wavelet feature extraction in block 16c.

Please replace the paragraph beginning on page 35 at line 13 and continuing to page 36 at line 4, with the following paragraph:

The VOP object extracted in the VOP extraction module 12 is available for potential classification as an object of interest, e.g., an intruder or non-intruder object. For this purpose, the present invention can first extract the image region surrounding the VOP object in bounding box refinement block 70, e.g., by selecting an image region such that a selected aspect ratio is maintained, e.g., an aspect ratio of 2:1. This object region can, e.g., then be scaled, e.g., into an image region of size 128x64, also in block 70. Haar wavelets, e.g., at the above-mentioned 2 scales and 3 orientations can then be used, e.g., to generate 13x5 vertical, horizontal, and diagonal coefficients at 32x32 scale and 29x 13 vertical, horizontal, and diagonal coefficients at 16x16 scale. Using, e.g., first order statistics, the described embodiment of the present invention can then, e.g., generate average wavelet coefficient images at the 2 scales and 3 orientations that can correspond to objects of interest, e.g., intruder objects. From these templates, e.g., the described embodiment of the present invention can determine the wavelet coefficients that contain enough information to discern the two classes of objects, e.g. using the Kullback information measure and/or manual selection. As an example, it has been experimentally shown by the applicants that a selected 180D wavelet feature vector can be used to train a classifier 16, e.g., a non-linear discriminant (NDA) neural network classifier. For a given test image, the selected wavelet coefficients can be extracted and fed to the classifier 16, as shown in Fig. 2b, which can then predict the class for the input image. A block diagram of the wavelet features based classifier is shown in Figure 6.

Please cancel the Abstract on page 93 and replace therewith the following replacement abstract, which begins on page 5 of this paper: